DOCUMENT RESUME

ED 244 687 JC 840 279

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TITLE The Effect of a Developmental Writing Course on Student Persistence and Achievement: A Research Report.
INSTITUTION Butte Coll., Oroville, CA.
PUB DATE Mar 84
NOTE 27p.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Academic Achievement; *Academic Persistence; Community Colleges; *English Instruction; Grades (Scholastic); *Program Effectiveness; *Remedial Programs; Student Placement; Two Year Colleges

ABSTRACT

A study was conducted at Butte College to determine the effectiveness of a developmental writing course (Eng 102) by examining comparative achievement and persistence in a subsequent freshman composition course (Eng 210) and comparative persistence and achievement in course work in general. Analyses of data on all 3,497 students who enrolled in Eng 210 between winter 1979 and fall 1983 revealed: (1) 75% of the students (N=2,617) had not completed a prior developmental writing class; (2) in contrast to the students who did not take Eng 102, those who completed the remedial course before enrolling in Eng 210 scored lower in every measure of prior English language ability, achieved significantly lower grades in Eng 210, persisted in Eng 210 at a comparable rate, completed significantly more units while taking Eng 210, completed significantly more units at Butte College, and achieved significantly higher college grade point averages; (3) lower measures of previous English language ability were required to earn A, B, and C grades in Eng 210 if the student had completed Eng 102; and (4) students who scored below the threshold for admission into Eng 210 on the college's assessment test, yet still registered for the course showed lower persistence and achievement than those who scored at this level and completed Eng 102. Graphs illustrating findings are included in the study report. (AYC)

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ED244687

The Effect of a Developmental Writing Course on Student Persistence and Achievement

A Research Report

March, 1984

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Office of Instruction
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JC 840 279

The Effect of a Developmental Writing Course on Student Persistence and Achievement

Introduction

Chances are less than even that college-bound high school students will be able to write English at even minimal college level when they graduate (CPEC, 1983). Institutions of higher education are responding to this wave of poorly prepared students in a variety of ways. A national survey conducted by the University of Texas in 1982 revealed that the fastest-growing college and university programs in this country are in developmental study skills (Roueche, Baker, and Roueche, in press). The researchers found that these programs are now swelling to accommodate students with the best academic records because even they are lacking in basic skills abilities. Virtually all community colleges in the country have developed remedial courses for academically disadvantaged students.

In California Community Colleges, the proportion of enrollments in remedial reading and writing courses has remained virtually constant at 45 percent of the enrollment in all English classes over the past three years. At the same time, the proportion of remedial courses to all English courses has risen, suggesting that the colleges are creating more courses targeted to the specific needs of their students (CPEC, 1983).

The cost of remediation for the California Community Colleges in 1980-81 was at least $66 million, with the State serving as a major contributor (CPEC, 1983). Because of this large demand upon State resources, attention is now being focused upon the effectiveness of remedial courses and programs. Sadly, most colleges cannot document evidence of student success in these courses and programs. In their 1977 national study, Roueche and Snow found that most colleges could not report how many students ever completed a required remedial program. Still fewer knew how many low-achieving students persisted from remedial programs into regular college courses and with what success. Evaluation of these multi-million dollar remedial programs was still limited to a few innovative colleges. In the great majority of the institutions they studied, evaluation was non-existent (Roueche and Snow, 1977). Colleges and universities appear to be so busy trying to meet their students' needs that they do not evaluate the efficacy of their efforts, citing reasons of lack of time, energy, and money (CPEC, 1983). Unfortunately, data that are collected are of program completion only, and not of performance in further academic work, which is the most critical evidence of real success (Roueche, in press).

The purpose of this report is to provide evidence of the effectiveness of developmental writing (ENG 102) at Butte College. The study focuses upon comparative persistence and achievement in a subsequent freshman composition (ENG 210) course and upon comparative persistence and achievement in Butte College coursework in general.

English Course Sequence

ENG 102, Composition Workshop II, is a four-unit course in developmental English which also serves as an Associate Degree graduation requirement. Prerequisites are English 101 (Composition Workshop I) or an acceptable score on the English placement test. The course is described as providing development of basic composition skills: how to write clear and unified paragraphs, how to build from sentence to paragraph to essay. The course is not graded and is offered on a credit or no-credit basis only.

ENG 210, Reading and Composition I, is a four-unit course in freshman composition. Prerequisites are currently ENG 102 (Composition Workshp II) or an acceptable score on the English placement test. The course is accepted by both the University of California and the California State University systems as transferable for freshman composition and is described as a development of critical reading skills and the writing of narrative, descriptive, expository, and argumentative prose. The course must be taken for a letter grade (A-F).

The English placement test was administered beginning with the 1982/83 academic year. Prior to that time, little data were systematically collected on measures of student ability or preparedness.

During the 1982/83 academic year, 540 students enrolled in twenty-four sections of ENG 102. Fourteen of the twenty-four sections were staffed by full-time instructors. During the same period, ENG 210 drew 759 students in thirty sections, seventeen of which were staffed by full-time faculty. A similar staffing pattern has existed for

approximately five years. Records are available for these courses for the past thirteen years.

Data Collection

Data were collected on every student who has taken freshman composition (ENG 210) at Butte College between Winter quarter 1979 and Fall quarter 1983 (20 instructional terms). This data file, consisting of 3497 student enrollment cases, includes student identification number, student gender, ENG 210 class master number, the quarter ENG 210 was taken, the year ENG 210 was taken, the time of day that the ENG 210 class began, the ENG 210 class meetings per week, the location of the ENG 210 class, the ENG 210 class size, the ENG 210 teacher identification number, the ENG 210 teacher gender, part- or full-time status of the ENG 210 teacher, the grade the student received in ENG 210, the units the student completed while taking ENG 210, the units completed at Butte College as of Summer 1983, the student's Butte College grade point average as of Summer 1983, the high school the student last attended, the student's high school grade point average, the student's ACT English score, the student's SAT verbal score, the student's score on the Nelson-Denny reading assessment test, and the student's score on the Stanford Task English and Reading assessment tests.

If the student took a previous developmental writing (ENG 102) class, data were recorded including ENG 102 master number, the quarter the student took ENG 102, the year the student took ENG 102, the time of day the ENG 102 class began, the ENG 102 class meetings per week, the

location of the ENG 102 class, the ENG 102 teacher identification number, the ENG 102 teacher gender, part- or full-time status of the ENG 102 teacher, and the units the student completed while taking ENG 102.

Data were collected from grade sheets, student personnel files, assessment office records, student transcripts, schedules of classes, and microfilmed records. As such, the data are properly classified as archival. With the exception of grade point averages, placement and achievement test scores, class size, units completed, and terms between courses, the data are categorical. Data structure for the file is shown in Table 1 on page 6.

Data File

Data were recorded on 3497 cases of student enrollments in ENG 210 from Winter quarter 1979 through Fall quarter 1983. Student name and identification number; student gender; ENG 210 class master number; the quarter, year, and time of day of the ENG 210 class; the ENG 210 instructor name, identification number, gender, and part- or full-time status; and the student's grade in ENG 210 were recorded from the ENG 210 grade sheets. Student transcripts were then examined to determine whether the student had taken a previous ENG 102 class and to record the units completed while taking ENG 210, the units completed at Butte College as of Summer 1983, and the student's Butte College grade point average as of Summer 1983. Student personnel files were examined to record which high school the student had last attended; the high school grade point average; and the student's scores on the ACT English

TABLE 1

Data File Structure

1. STID - student identification number
2. SSEX - student gender
3. CON210 - ENG 210 class master number
4. QTR210 - quarter the ENG 210 class was taken
5. YR210 - year the ENG 210 class was taken
6. TIM210 - time of day the ENG 210 class began
7. MT210 - ENG 210 class meetings per week
8. LOC210 - ENG 210 class location
9. SIZ210 - ENG 210 class enrollment
10. INS210 - ENG 210 instructor code
11. SEX210 - ENG 210 instructor gender
12. TYP210 - ENG 210 instructor part- or full-time status
13. GR210 - student grade in ENG 210
14. UNI210 - units completed while taking ENG 210
15. CON102 - ENG 102 class master number
16. QTR102 - quarter the ENG 102 class was taken
17. YR102 - year the ENG 102 class was taken
18. TIM102 - time of day the ENG 102 class was taken
19. MT102 - ENG 102 class meetings per week
20. LOC102 - ENG 102 class location
21. SIZ102 - ENG 102 class enrollment
22. INS102 - ENG 102 instructor code
23. SEX102 - ENG 102 instructor gender
24. TYP102 - ENG 102 instructor part- or full-time status
25. UNI102 - units completed while taking ENG 102
26. BCUNIT - units completed at Butte College as of Summer Session 1983
27. BCGPA - Butte College grade point average as of Summer Session 1983
28. HS - code for last high school attended
29. HSGPA - high school grade point average
30. ACT - score on English section of the ACT
31. SAT - score on verbal section of the SAT
32. NEL - score on the Nelson-Denny reading assessment examination
33. ENGPL - score on the Stanford Task English assessment examination
34. RDGPL - score on the Stanford Task Reading assessment examination
35. TRM210 - term the student enrolled in ENG 210
36. TRM102 - term the student enrolled in ENG 102

test, the SAT verbal test, and the Nelson-Denny reading test. Stanford Task English and Reading assessment tests scores were recorded from assessment office records. Class location and beginning times were recorded from archival class schedules. Microfilm records were used to record data on students whose files were inactive.

If the student had received a credit grade in a previous ENG 102 class, the quarter and year of the student's enrollment were recorded from the student's transcript. If the student had repeated ENG 102, data were recorded only on the most recent successful class completion prior to the ENG 210 class. The number of units which the student completed while taking the ENG 102 class was also recorded from the transcript. The student was then traced by name and identification number through the ENG 102 grade sheets for the appropriate quarter and year to record data on ENG 102 master number, the number of class meetings per week, the instructor name and identification number, the instructor gender, and the part- or full-time status of the instructor. Class location and time of day the class began were recorded from archival class schedules. Quarters and years of class offerings were used to code term identification numbers, which were later used to compute the number of terms between classes.

Data Analysis

The data file was analyzed using frequency, crosstabulation, analysis of variance, and multiple linear regression programs available in the Statistical Package for the Social Sciences (SPSS) library of

programs. Analyses were carried out on the Butte College DEC PDP-11 instructional computer.

Findings

1. **Seventy-five percent (2617) of the 3497 students who enrolled in freshman composition (ENG 210) at Butte College in the last five years did not complete a prior developmental writing class (ENG 102).**

2. **Students who complete developmental writing (ENG 102) prior to enrolling in freshman composition (ENG 210) score significantly lower than those who don't in every measure of prior English language ability.**

Students who complete a prior ENG 102 class have an average high school grade point average of 2.69 on a 4.00 scale. Those who didn't complete a prior ENG 102 class have an average high school grade point average of 2.82. This difference is significant ($F = 19.0$, significance $<.001$).

Students who complete a prior ENG 102 class have an average ACT English score of 13.98. Those who didn't complete a prior ENG 102 class have an average score of 17.50. This difference is significant ($F = 18.6$, significance $<.001$).

Students who complete a prior ENG 102 class have an average SAT verbal score of 366.8. Those who didn't complete a prior ENG 102 class have an average score of 420.4. This difference is significant ($F = 38.1$, significance $<.001$).

Students who complete a prior ENG 102 class have an average Nelson-Denny reading assessment score of 47.0. Those who didn't

complete a prior ENG 102 class have an average score of 59.6. This difference is significant (F = 20.1, significance <.001).

Students who complete a prior ENG 102 class have an average Stanford Task English assessment score of 51.4. Those who didn't complete a prior ENG 102 class have an average score of 59.2. This difference is significant (F = 165.4, significance <.001).

Students who complete a prior ENG 102 class have an average Stanford Task Reading assessment score of 57.5. Those who didn't complete a prior ENG 102 class have an average score of 63.4. This difference is significant (F = 28.2, significance <.001).

3. Students who complete developmental writing (ENG 102) prior to enrolling in freshman composition (ENG 210) achieve slightly, but still significantly, lower grades in the subsequent freshman composition class than those who didn't.

Students who complete a prior ENG 102 class achieve an average grade of 2.55 on a 4.00 scale in a subsequent ENG 210 class. Those who don't complete a prior ENG 102 class achieve an average grade of 2.67 in the ENG 210 class. This difference is significant (F = 7.25, significance = .007).

4. Lower measures of previous English language ability are required to earn grades of A, B, and C in freshman composition (ENG 210) if a student has completed a previous developmental writing (ENG 102) course. See Figures 1-5 on pages 14-18.

5. Students who complete developmental writing (ENG 102) prior to enrolling in freshman composition (ENG 210) persist in freshman composition at a rate equal to those students who don't.

Eighty-one percent of the students who complete a prior ENG 102 class persist to course completion in a subsequent ENG 210 class. Eighty-two percent of the students who don't complete a prior ENG 102 class persist to completion in ENG 210. This difference is not significant (F = 1.1, significance = .295).

6. **Lower measures of previous English language ability are required to persist to completion of a freshman composition (ENG 210) course if a student has completed a previous developmental writing (ENG 102) course.** See Figures 6-10 on pages 19-23.

7. **Students who complete developmental writing (ENG 102) prior to enrolling in freshman composition (ENG 210) complete slightly, but still significantly, more units while taking freshman composition.**

Students who completed a prior ENG 102 class completed an average of 11.58 units during the quarter in which they enrolled in ENG 210. Students who did not complete a prior ENG 102 class completed an average of 11.01 units during the quarter in which they enrolled in ENG 210. This difference is significant (F = 6.5, significance = .011).

8. **Students who complete developmental writing (ENG 102) prior to enrolling in freshman composition (ENG 210) complete substantially and significantly more units at Butte College than those students who don't.**

Students who completed a prior ENG 102 class completed an average of 87.2 units at Butte College. Those who didn't complete a prior ENG 102 class completed an average of 59.9 units. This difference is significant (F = 302.1, significance <.001).

9. Students who complete developmental writing (ENG 102) prior to enrolling in freshman composition (ENG 210) achieve significantly higher Butte College grade point averages than those who don't.

Students who completed a prior ENG 102 class achieved an average grade point average of 2.88 on a 4.00 scale while at Butte College. Students who didn't complete a prior ENG 102 class achieved a 2.80 grade point average. This difference is significant (F = 6.9, significance = .008).

10. Students who score below the threshold for admission into freshman composition (ENG 210) on the Butte College assessment test, yet still register for ENG 210 without first completing developmental writing (ENG 102), show lower persistence and achievement than those who score at this level and who do complete a prior ENG 102 class.

Sixty-nine students enrolled in ENG 210 without a prior ENG 102 class, despite scoring below 57 on the Stanford Task English assessment test. Eighty-two students who scored below 57 on the test did successfully complete an ENG 102 class before enrolling in ENG 210.

Students in this group who did not complete a prior ENG 102 class received an average grade of 2.54 on a 4.00 scale in ENG 210, while those who did complete ENG 102 received an average grade of 2.71. However, due to the small size of this group, this difference is not significant (F = 1.36, significance = .2451).

Eighty-one percent of the students in this group who did not complete a prior ENG 102 class persisted to completion in a subsequent ENG 210 class, while eighty-seven percent of those who did complete ENG 102 persisted in the subsequent ENG 210 class. However, due to the

small size of this group, this difference is not significant (F = .819, significance = .3704).

Students in this group who did not complete a prior ENG 102 class completed 49.8 units at Butte College, while those who did complete ENG 102 completed 57.5 units. However, due to the small size of this group, this difference is not significant (F = 1.63, significance = .2001).

Students in this group who did not complete a prior ENG 102 class achieved a mean Butte College grade point average of 2.51 on a 4.00 scale, while those who did complete ENG 102 achieved a mean Butte College grade point average of 2.85. This difference is significant (F = 6.47, significance = .0116).

Conclusions

It is clear that completion of developmental writing (ENG 102) prior to enrolling in freshman composition (ENG 210) has a substantial and significant impact upon student achievement and persistence at Butte College. While the students enrolling in ENG 102 score significantly lower in every measure of prior English language ability, they are able to persist to course completion in ENG 210 at a rate that is not significantly different from those students who did not complete ENG 102 but came to us with higher measures of ability. Furthermore, lower measures of previous English language ability are required to persist to completion of ENG 210 if the student has completed a previous ENG 102 course (see Figures 6-10 on pages 19-23).

While students who complete a previous ENG 102 course receive lower grades in ENG 210 than those who don't, it should be remembered that they came to Butte College scoring lower in every measure of English language ability than those who don't complete a previous ENG 102 course. Moreover, the fact that lower measures of previous English language ability are required to earn grades of A, B, and C in freshman composition (ENG 210) if a student has completed a previous ENG 102 course is strong evidence of the positive effect of ENG 102.

Furthermore, the study revealed that completion of ENG 102 prior to ENG 210 has a positive impact throughout the college experience. Students who have had the previous ENG 102 class are able to complete more units during the quarter they are enrolled in ENG 210 than are those who don't. They complete substantially more units while at Butte College, and they achieve a significantly higher Butte College grade point average.

Presumably, students who complete an ENG 102 class prior to enrolling in ENG 210 are more able to achieve and persist in college coursework despite significantly poorer prior English language ability.

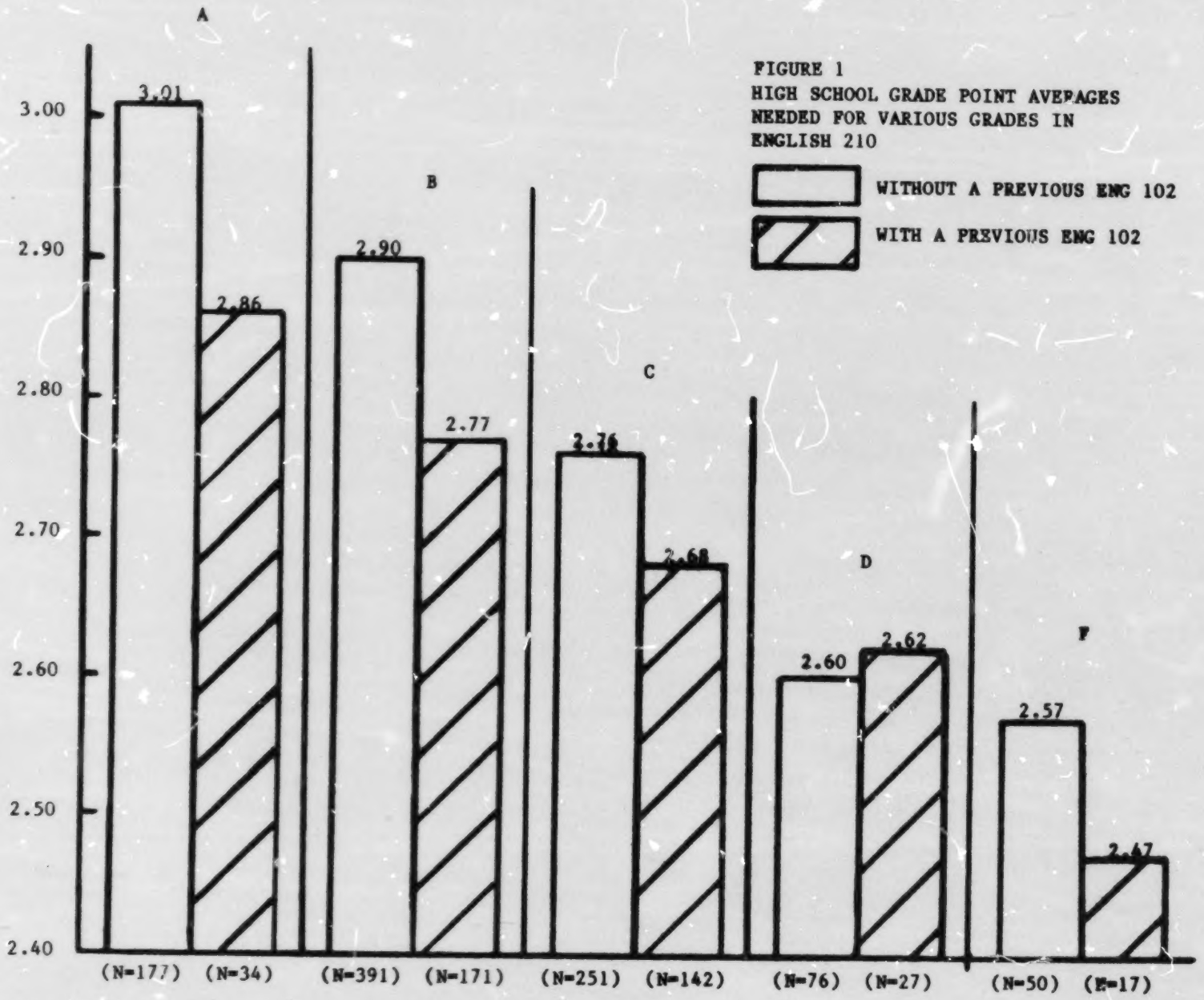


FIGURE 1
HIGH SCHOOL GRADE POINT AVERAGES NEEDED FOR VARIOUS GRADES IN ENGLISH 210

FIGURE 2

SAT VERBAL SCORES NEEDED FOR VARIOUS GRADES IN ENGLISH 210

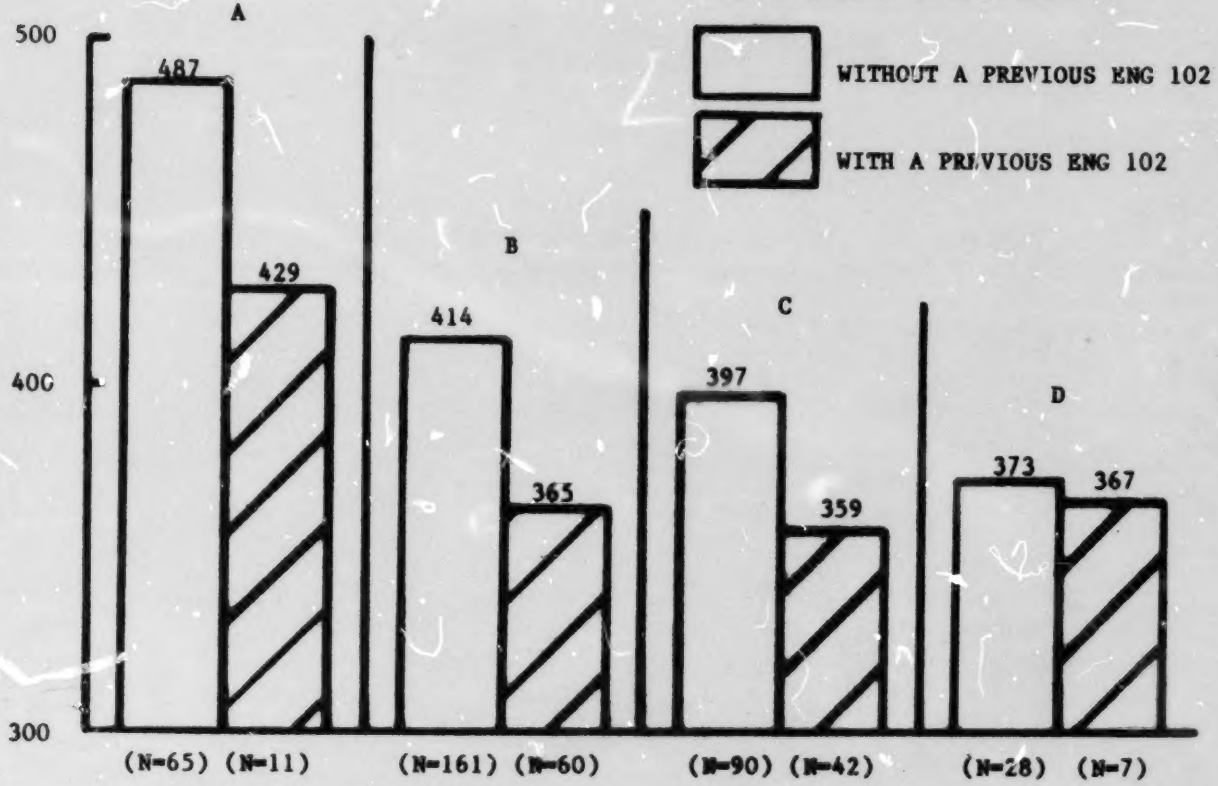


FIGURE 3

ACT ENGLISH SCORES NEEDED FOR VARIOUS GRADES IN ENGLISH 210

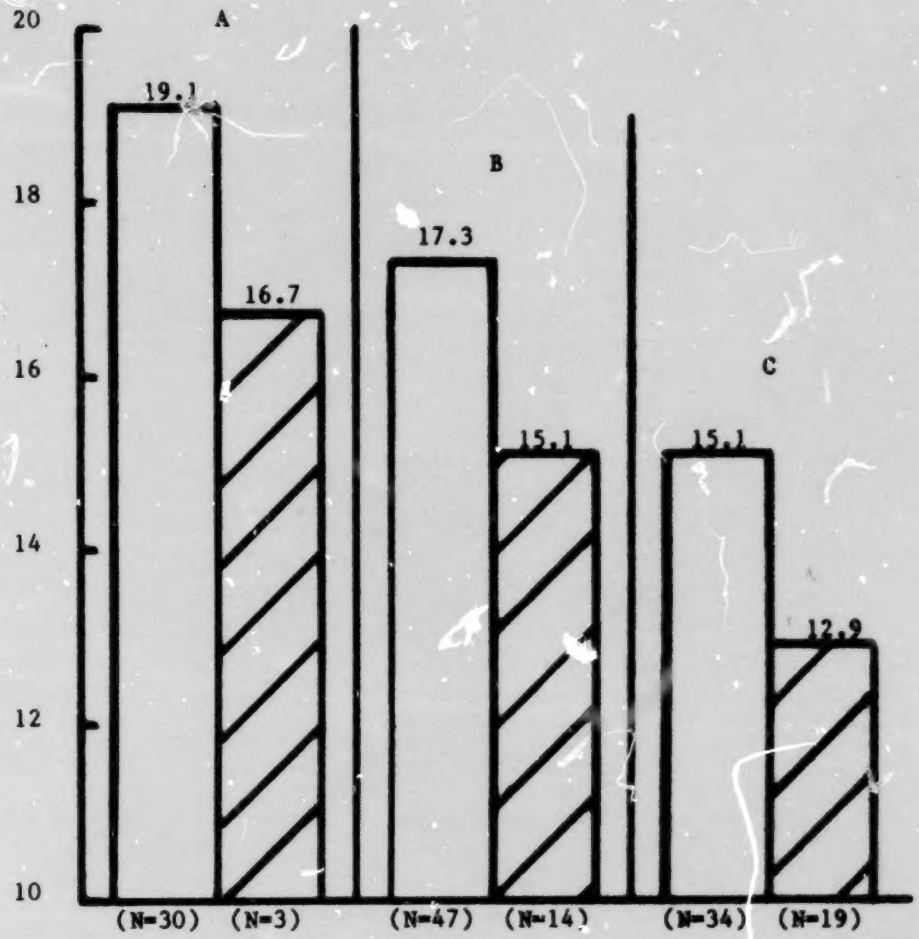


FIGURE 4. STANFORD TASK ENGLISH SCORES NEEDED FOR VARIOUS GRADES IN ENGLISH 210

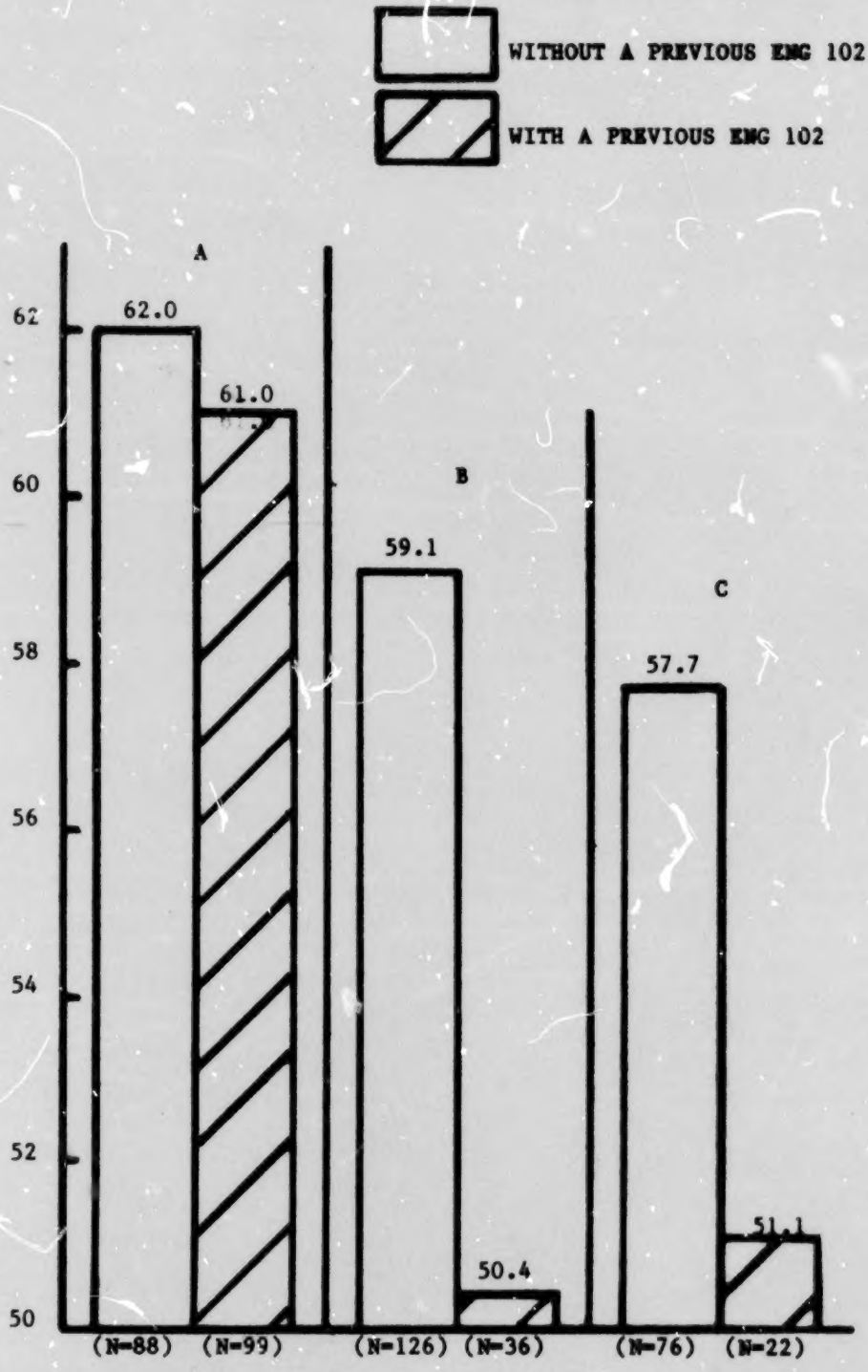


FIGURE 5. STANFORD TASK READING SCORES NEEDED FOR VARIOUS GRADES IN ENGLISH 210

FIGURE 6

HIGH SCHOOL GPA NEEDED FOR PERSISTENCE TO COURSE COMPLETION IN ENG 280

WITHOUT A PREVIOUS ENG 102

WITH A PREVIOUS ENG 102

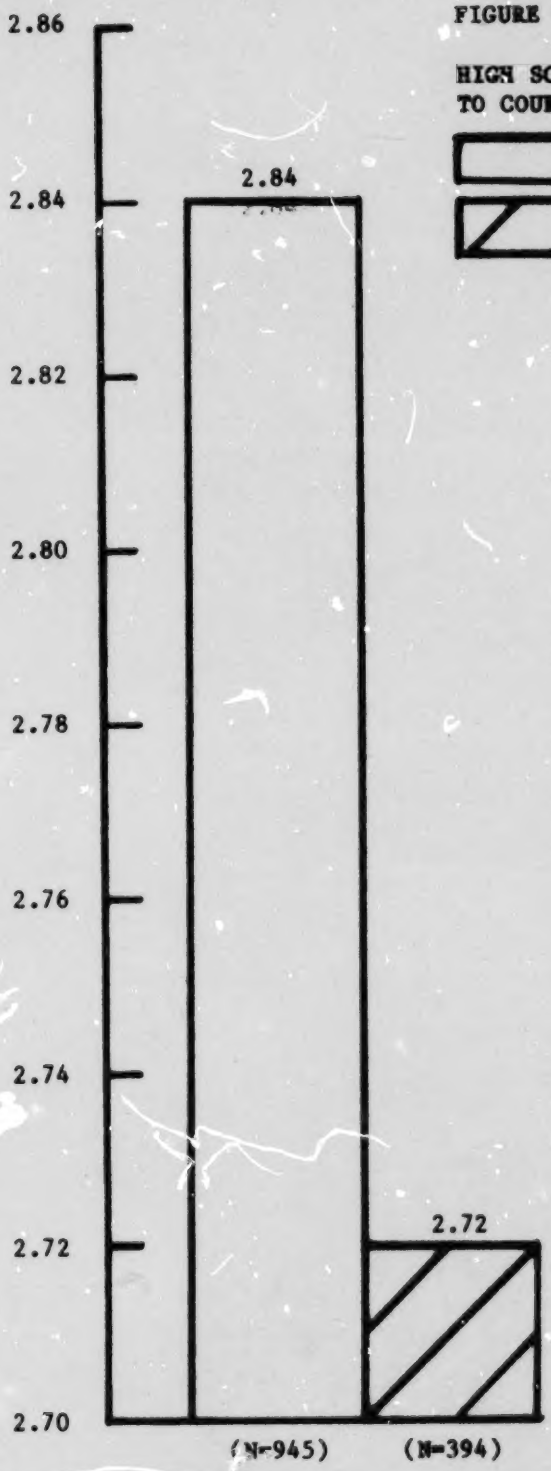


FIGURE 7

SAT VERBAL SCORES NEEDED FOR PERSISTENCE TO COURSE COMPLETION IN ENGLISH 210

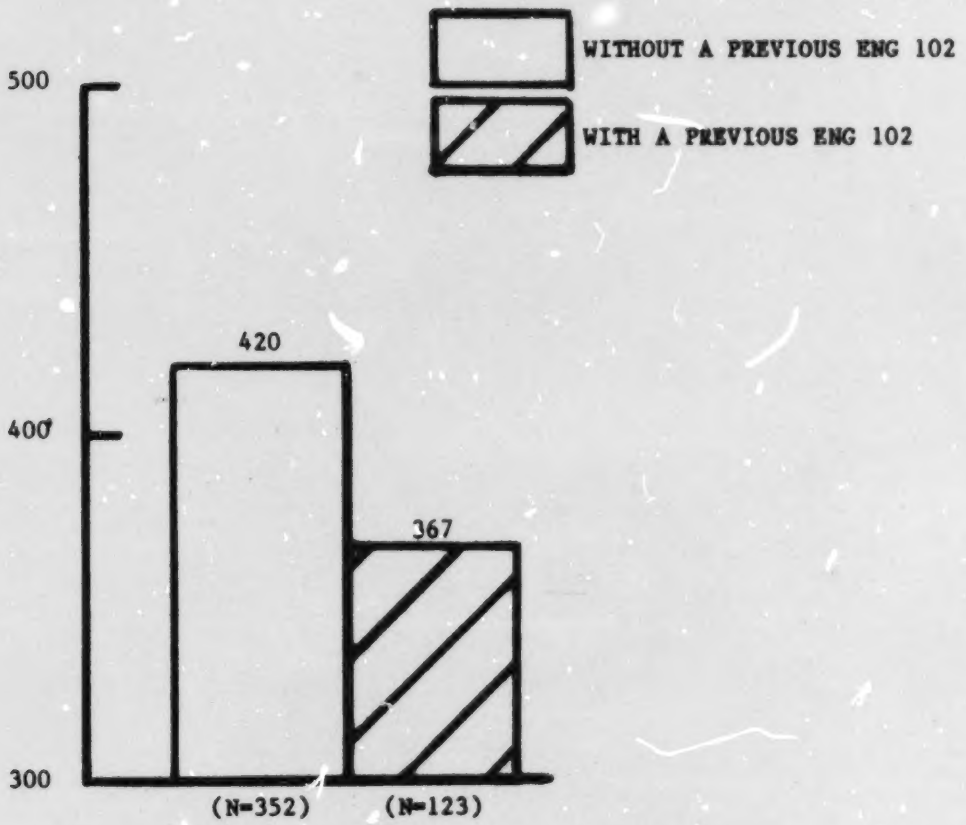


FIGURE 8. ACT ENGLISH SCORES NEEDED FOR PERSISTENCE TO COURSE COMPLETION IN ENGLISH 210

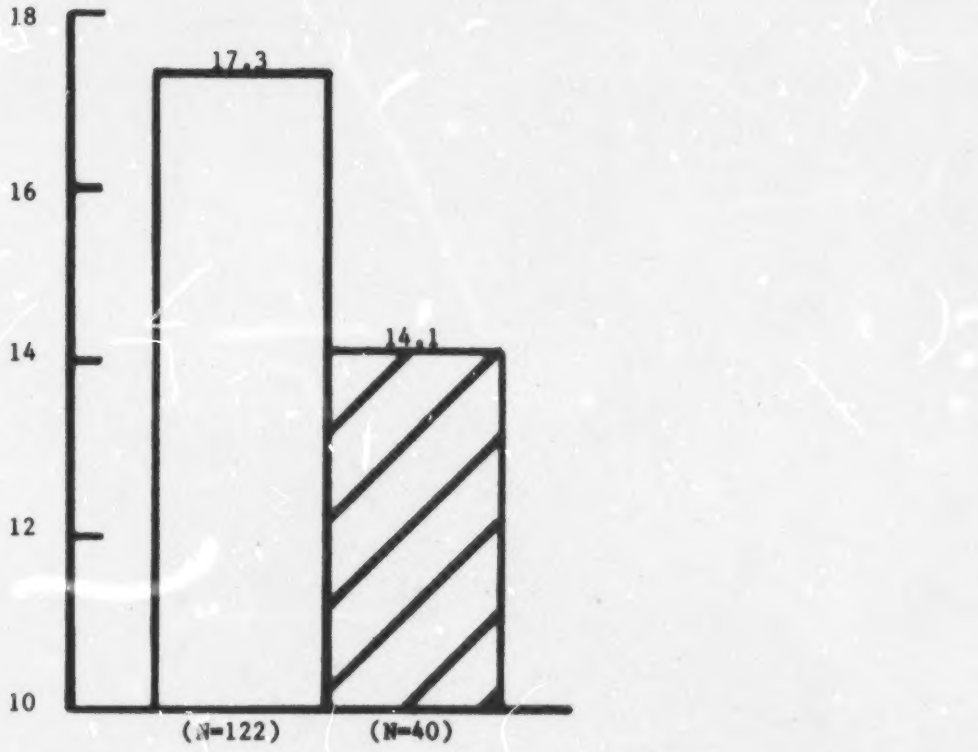


FIGURE 9. STANFORD TASK ENGLISH SCORES NEEDED FOR PERSISTENCE TO COURSE COMPLETION IN ENGLISH 210

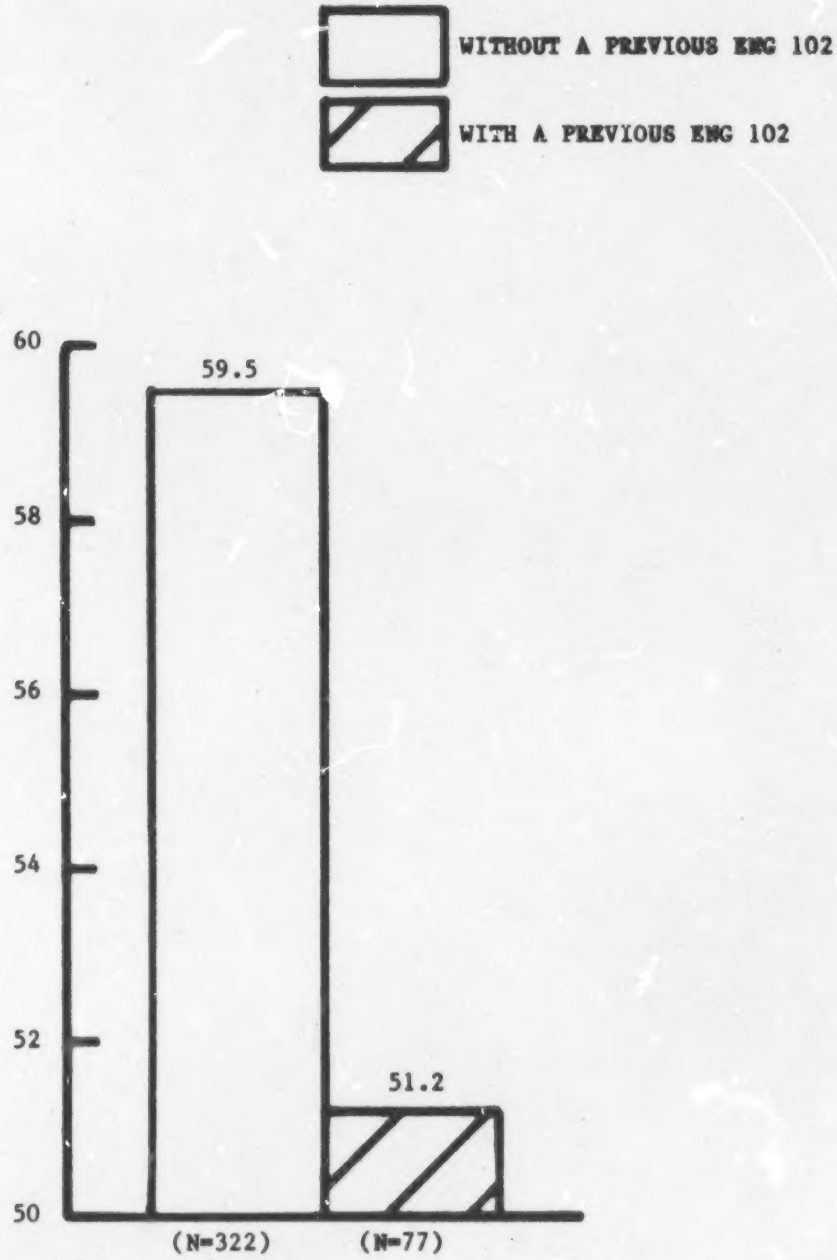
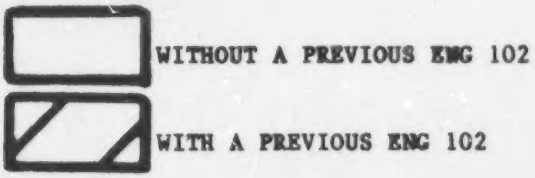
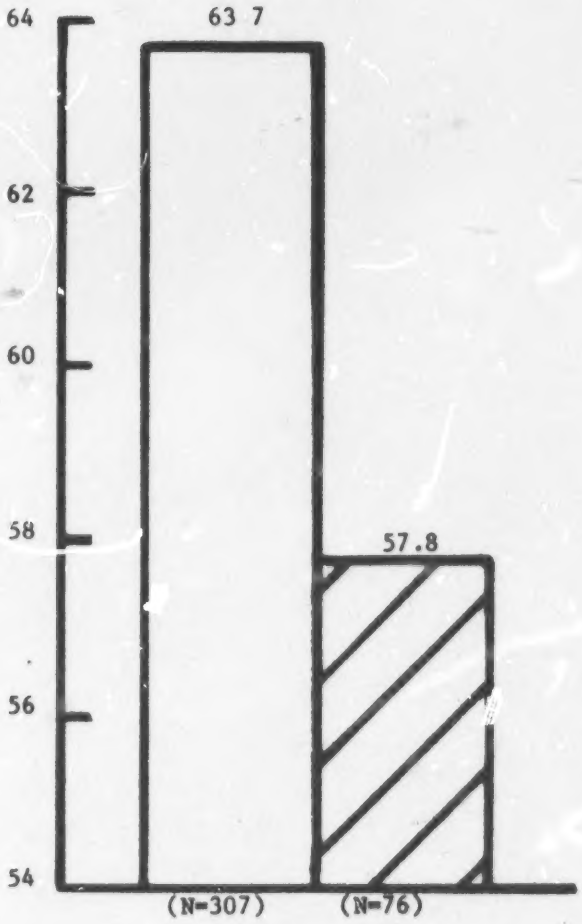


FIGURE 10. STANFORD TASK READING SCORES NEEDED FOR PERSISTENCE TO COURSE COMPLETION IN ENGLISH 210





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